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 NEWS  1           Web Page URLs for STN Seminar Schedule - N. America
 NEWS  2  Apr 08   "Ask CAS" for self-help around the clock
 NEWS  3  Apr 09   BEILSTEIN: Reload and Implementation of a New Subject Area
 NEWS  4  Apr 09   ZDB will be removed from STN
 NEWS  5  Apr 19   US Patent Applications available in IFICDB, IFIPAT, and IFIUDB
 NEWS  6  Apr 22   Records from IP.com available in CAPLUS, HCAPLUS, and ZCAPLUS
 NEWS  7  Apr 22   BIOSIS Gene Names now available in TOXCENTER
 NEWS  8  Apr 22   Federal Research in Progress (FEDRIP) now available
 NEWS  9  Jun 03   New e-mail delivery for search results now available
 NEWS 10  Jun 10   MEDLINE Reload
 NEWS 11  Jun 10   PCTFULL has been reloaded
 NEWS 12  Jul 02   FOREGE no longer contains STANDARDS file segment
 NEWS 13  Jul 22   USAN to be reloaded July 28, 2002;
                   saved answer sets no longer valid
 NEWS 14  Jul 29   Enhanced polymer searching in REGISTRY
 NEWS 15  Jul 30   NETFIRST to be removed from STN
 NEWS 16  Aug 08   CANCERLIT reload
 NEWS 17  Aug 08   PHARMAMarketLetter(PHARMAML) - new on STN
 NEWS 18  Aug 08   NTIS has been reloaded and enhanced
 NEWS 19  Aug 19   Aquatic Toxicity Information Retrieval (AQUIRE)
                   now available on STN
 NEWS 20  Aug 19   IFIPAT, IFICDB, and IFIUDB have been reloaded
 NEWS 21  Aug 19   The MEDLINE file segment of TOXCENTER has been reloaded
 NEWS 22  Aug 26   Sequence searching in REGISTRY enhanced
 NEWS 23  Sep 03   JAPIO has been reloaded and enhanced
 NEWS 24  Sep 16   Experimental properties added to the REGISTRY file
 NEWS 25  Sep 16   Indexing added to some pre-1967 records in CA/CAPLUS
 NEWS 26  Sep 16   CA Section Thesaurus available in CAPLUS and CA
 NEWS 27  Oct 01   CASREACT Enriched with Reactions from 1907 to 1985
 NEWS 28  Oct 21   EVENTLINE has been reloaded
 NEWS 29  Oct 24   BEILSTEIN adds new search fields
 NEWS 30  Oct 24   Nutraceuticals International (NUTRACEUT) now available on STN
 NEWS 31  Oct 25   MEDLINE SDI run of October 8, 2002                    on STN

 NEWS EXPRESS  October 14 CURRENT WINDOWS VERSION IS V6.01,
               CURRENT MACINTOSH VERSION IS V6.0a(ENG) AND V6.0Ja(JP),
               AND CURRENT DISCOVER FILE IS DATED 01 OCTOBER 2002
 NEWS HOURS    STN Operating Hours Plus Help Desk Availability
 NEWS INTER    General Internet Information
 NEWS LOGIN    Welcome Banner and News Items
 NEWS PHONE    Direct Dial and Telecommunication Network Access to STN
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FILE 'HOME' ENTERED AT 10:35:08 ON 30 OCT 2002

=> file caplus

| COST IN U.S. DOLLARS | SINCE FILE ENTRY | TOTAL SESSION |
|---|---|---|
| FULL ESTIMATED COST | 0.21 | 0.21 |

FILE 'CAPLUS' ENTERED AT 10:35:23 ON 30 OCT 2002
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FILE COVERS 1907 - 30 Oct 2002 VOL 137 ISS 18
FILE LAST UPDATED: 29 Oct 2002 (20021029/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

CAS roles have been modified effective December 16, 2001. Please check your SDI profiles to see if they need to be revised. For information on CAS roles, enter HELP ROLES at an arrow prompt or use the CAS Roles thesaurus (/RL field) in this file.

=> d 130:163108 all

ANSWER 1 CAPLUS COPYRIGHT 2002 ACS
AN 130:163108 CAPLUS
TI Diprotin A, an inhibitor of dipeptidyl aminopeptidase IV(EC 3.4.14.5) produces naloxone-reversible analgesia in rats
AU Ronai, Andras Z.; Timar, Julianna; Mako, Eva; Erdo, Franciska; Gyarmati, Zsuzsanna; Toth, Geza; Orosz, Gyorgy; Furst, Susanne; Szekely, Jozsef I.
CS Department of Pharmacology, Semmelweis University of Medicine, Budapest, H-1445, Hung.
SO Life Sciences (1998), Volume Date 1999, 64(2), 145-152
CODEN: LIFSAK; ISSN: 0024-3205
PB Elsevier Science Inc.
DT Journal
LA English
CC 1-11 (Pharmacology)
Section cross-reference(s): 2
AB The dipeptidyl aminopeptidase IV (DP IV) inhibitor Diprotin A produces a full, dose-dependent, short-lasting and naloxone-reversible analgesia in the rat tail-flick test when given intracerebroventricularly, with an ED50 of 295 nmol/rat but it has no direct opioid agonist activity in the

longitudinal muscle strip of guinea-pig ileum bioassay. Two of the potential DP IV substrates, morphiceptin and endomorphin 1, identified recently in bovine brain were also analgesic given by similar route. The action of endomorphin I was more potent (ED50 = 7.9 nmol/rat) and slightly but significantly more sustained than that of Diprotin A. Diprotin A neither potentiated nor prolonged the effect of a marginally analgesic dose of endomorphin 1. The distinct time course and the lack of potentiation indicate that in the analgesic effect of Diprotin A in rats the protection of a brain Tyr-Pro-peptide other than endomorphin 1 is involved.

ST dipeptidyl aminopeptidase inhibitor Diprotin A analgesia

IT Analgesics
(inhibitor of dipeptidyl aminopeptidase IV(EC 3.4.14.5) Diprotin A produces naloxone-reversible analgesia in rats in relation to effect of morphiceptin and endomorphin 1)

IT 74135-04-9, Morphiceptin 90614-48-5, Diprotin A 189388-22-5, Endomorphin 1
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(inhibitor of dipeptidyl aminopeptidase IV(EC 3.4.14.5) Diprotin A produces naloxone-reversible analgesia in rats in relation to effect of morphiceptin and endomorphin 1)

IT 54249-88-6
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(inhibitor of dipeptidyl aminopeptidase IV(EC 3.4.14.5) Diprotin A produces naloxone-reversible analgesia in rats in relation to effect of morphiceptin and endomorphin 1)

RE.CNT 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE


(1) Arunlakshana, O; Br J Pharmacol 1959, V14, P48 CAPLUS
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(15) Ronai, A; FEBS Lett 1977, V74, P182 CAPLUS
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(25) Zadina, J; Nature 1997, V386, P499 CAPLUS
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=> file reg

| COST IN U.S. DOLLARS | SINCE FILE ENTRY | TOTAL SESSION |
|---|---|---|
| FULL ESTIMATED COST | 10.49 | 10.70 |

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)  SINCE FILE ENTRY  TOTAL SESSION
CA SUBSCRIBER PRICE  -0.62  -0.62

FILE 'REGISTRY' ENTERED AT 10:47:08 ON 30 OCT 2002
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Property values tagged with IC are from the ZIC/VINITI data file
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STRUCTURE FILE UPDATES:  29 OCT 2002  HIGHEST RN 467418-81-1
DICTIONARY FILE UPDATES:  29 OCT 2002  HIGHEST RN 467418-81-1

TSCA INFORMATION NOW CURRENT THROUGH MAY 20, 2002

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

Crossover limits have been increased.  See HELP CROSSOVER for details.

Experimental and calculated property data are now available.  See HELP
PROPERTIES for more information.  See STNote 27, Searching Properties
in the CAS Registry File, for complete details:
http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

```
=> s diprotin a
             3 DIPROTIN
       1379231 A
L1           1 DIPROTIN A
                 (DIPROTIN(W)A)

=> d l1 all

L1   ANSWER 1 OF 1  REGISTRY  COPYRIGHT 2002 ACS
RN   90614-48-5  REGISTRY
CN   L-Isoleucine, L-isoleucyl-L-prolyl- (9CI)  (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN   L-Isoleucine, N-(1-L-isoleucyl-L-prolyl)-
OTHER NAMES:
CN   Diprotin A
FS   STEREOSEARCH
MF   C17 H31 N3 O4
CI   COM
LC   STN Files:   AGRICOLA, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAPLUS, CHEMCATS,
       CSCHEM, DDFU, DRUGU, EMBASE, MEDLINE, MSDS-OHS, NAPRALERT, RTECS*,
       TOXCENTER, USPATFULL
         (*File contains numerically searchable property data)
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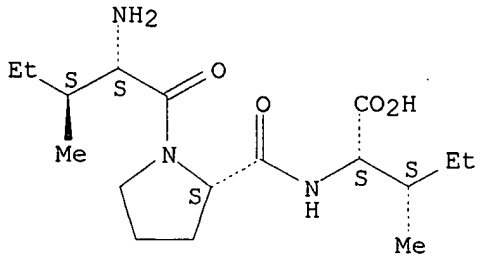
Ring System Data

| Elemental Analysis EA | Elemental Sequence ES | Size of the Rings SZ | Ring System Formula RF | Ring Identifier RID | RID Occurrence Count |
|---|---|---|---|---|---|
| C4N | NC4 | 5 | C4N | 16.136.1 | 1 |

Absolute stereochemistry.



Calculated Properties (CALC)

| CODE | PROPERTY | VALUE | CONDITION | NOTE |
|---|---|---|---|---|
| HD | H donors | 4 | | (1) ACD |
| HAC | H acceptors | 7 | | (1) ACD |
| MW | Molecular Weight | 341.45 | | (1) ACD |
| LOGP | logP | 1.580+/-0.656 | | (1) ACD |
| LOGD | logD | -1.52 | pH 1 | (1) ACD |
| LOGD | logD | -1.04 | pH 4 | (1) ACD |
| LOGD | logD | -0.93 | pH 7 | (1) ACD |
| LOGD | logD | -1.00 | pH 8 | (1) ACD |
| LOGD | logD | -2.10 | pH 10 | (1) ACD |
| PKA | pKa | 3.68+/-0.22 | Most Acidic | (1) ACD |
| PKA | pKa | 8.64+/-0.39 | Most Basic | (1) ACD |
| SLB.MOL | Molar Solubility | >=0.1 - <1 mol/L | pH 1 | (1) ACD |
| SLB.MOL | Molar Solubility | >=0.1 - <1 mol/L | pH 4 | (1) ACD |
| SLB.MOL | Molar Solubility | >=0.1 - <1 mol/L | pH 7 | (1) ACD |
| SLB.MOL | Molar Solubility | >=0.1 - <1 mol/L | pH 8 | (1) ACD |
| SLB.MOL | Molar Solubility | >=1 mol/L | pH 10 | (1) ACD |

(1) Calculated using Advanced Chemistry Development (ACD) Software Solaris V4.67 ((C) 1994-2002 ACD)

40 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
40 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1

AN 137:68128 CA
TI Aromatic amino acid decarboxylase proteins of a parasitic helminth, nucleic acid molecules coding them, and uses thereof
IN Tang, Liang
PA USA
SO U.S. Pat. Appl. Publ., 28 pp., Cont.-in-part of U.S. Ser. No. 129,377, abandoned.
CODEN: USXXCO
DT Patent
LA English
IC ICM A61K039-00
ICS C07H021-04; C12N009-64; C12P021-02; C12N005-06
NCL 424191100
CC 63-3 (Pharmaceuticals)
Section cross-reference(s): 1, 7, 9, 15

FAN.CNT 2

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | US 2002081313 | A1 | 20020627 | US 2001-777558 | 20010205 |
| | WO 2000008163 | A2 | 20000217 | WO 1999-US17858 | 19990805 |
| | WO 2000008163 | A3 | 20000720 | | |

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRAI US 1998-129377 19980805
WO 1999-US17858 19990805

AB The present invention relates to parasitic helminth arom. amino acid decarboxylase proteins; to parasitic helminth arom. amino acid decarboxylase nucleic acid mols., including those that encode such arom. amino acid decarboxylase proteins; to antibodies raised against such arom. amino acid decarboxylase proteins; and to compds. that inhibit parasitic helminth arom. amino acid decarboxylase activity. The present invention also includes methods to obtain such proteins, nucleic acid mols., antibodies, and inhibitory compds. Also included in the present invention are therapeutic compns. comprising such proteins, nucleic acid mols., antibodies and/or inhibitory compds. as well as the use of such therapeutic compns. to protect animals from diseases caused by filariids. The present invention also includes a method for detecting the presence of amino acid decarboxylases.

ST amino acid decarboxylase

IT Immunostimulants
(adjuvants; arom. amino acid decarboxylase proteins of a parasitic helminth, nucleic acid mols. coding them, and pharmacol. uses thereof)

IT Alleles
Animal tissue culture
Anthelmintics
Brugia malayi
Dirofilaria immitis
Enzyme kinetics
Immunization
Molecular cloning
Nucleic acid hybridization
PCR (polymerase chain reaction)
Protein sequences
Transformation, genetic
cDNA sequences
(arom. amino acid decarboxylase proteins of a parasitic helminth, nucleic acid mols. coding them, and pharmacol. uses thereof)

IT Antibodies
RL: ARG (Analytical reagent use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(arom. amino acid decarboxylase proteins of a parasitic helminth, nucleic acid mols. coding them, and pharmacol. uses thereof)

IT Nucleic acids
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(arom. amino acid decarboxylase proteins of a parasitic helminth, nucleic acid mols. coding them, and pharmacol. uses thereof)

IT Oligonucleotides
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL

(Biological study); USES (Uses)
(arom. amino acid decarboxylase proteins of a parasitic helminth, nucleic acid mols. coding them, and pharmacol. uses thereof)

IT Primers (nucleic acid)
RL: PRP (Properties)
(arom. amino acid decarboxylase proteins of a parasitic helminth, nucleic acid mols. coding them, and pharmacol. uses thereof)

IT Proteins
RL: PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(arom. amino acid decarboxylase proteins of a parasitic helminth, nucleic acid mols. coding them, and pharmacol. uses thereof)

IT Drug delivery systems
(carriers; arom. amino acid decarboxylase proteins of a parasitic helminth, nucleic acid mols. coding them, and pharmacol. uses thereof)

IT Larva
(filarial; arom. amino acid decarboxylase proteins of a parasitic helminth, nucleic acid mols. coding them, and pharmacol. uses thereof)

IT Filaria
(larvae, molting of; arom. amino acid decarboxylase proteins of a parasitic helminth, nucleic acid mols. coding them, and pharmacol. uses thereof)

IT Drug screening
(of anthelmintics; arom. amino acid decarboxylase proteins of a parasitic helminth, nucleic acid mols. coding them, and pharmacol. uses thereof)

IT Molting
(of larval filariae; arom. amino acid decarboxylase proteins of a parasitic helminth, nucleic acid mols. coding them, and pharmacol. uses thereof)

IT 439537-77-6 439537-81-2 439537-85-6 439537-88-9 439537-91-4
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(amino acid sequence; arom. amino acid decarboxylase proteins of a parasitic helminth, nucleic acid mols. coding them, and pharmacol. uses thereof)

IT 9042-64-2, Aromatic amino acid decarboxylase
RL: ANT (Analyte); BSU (Biological study, unclassified); PRP (Properties); ANST (Analytical study); BIOL (Biological study)
(arom. amino acid decarboxylase proteins of a parasitic helminth, nucleic acid mols. coding them, and pharmacol. uses thereof)

IT 59-92-7, Dopa, biological studies 75-12-7, Formamide, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(arom. amino acid decarboxylase proteins of a parasitic helminth, nucleic acid mols. coding them, and pharmacol. uses thereof)

IT 258873-43-7 439537-72-1 439537-73-2 439537-74-3 439537-79-8 439537-83-4 439537-93-6
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(arom. amino acid decarboxylase proteins of a parasitic helminth, nucleic acid mols. coding them, and pharmacol. uses thereof)

IT 51-61-6, Dopamine, formation (nonpreparative)
RL: FMU (Formation, unclassified); FORM (Formation, nonpreparative)
(arom. amino acid decarboxylase proteins of a parasitic helminth, nucleic acid mols. coding them, and pharmacol. uses thereof)

IT 50-67-9, Serotonin, biological studies 53-79-2, Puromycin 55-91-4, Diisopropyl fluorophosphate 57-56-7, Semicarbazide 60-00-4, Edta, biological studies 66-71-7, 1,10-Phenanthroline 128-53-0, Ethylmaleimide 138-85-2 230-46-6, 1,7-Phenanthroline 329-98-6, Pmsf 13434-13-4, Actinonin 30827-99-7, Pefabloc 36357-77-4, Phosphoramidon 51050-59-0, 3,4-Dichloroisocoumarin 58970-76-6, Bestatin 66701-25-5, E-64 90614-48-5, Diprotin A 90614-49-6, Diprotin b

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(arom. amino acid decarboxylase proteins of a parasitic helminth, nucleic acid mols. coding them, and pharmacol. uses thereof)

IT 439537-76-5 439537-78-7 439537-80-1 439537-82-3 439537-84-5
439537-86-7 439537-87-8 439537-89-0 439537-90-3 439537-92-5
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(nucleotide sequence; arom. amino acid decarboxylase proteins of a parasitic helminth, nucleic acid mols. coding them, and pharmacol. uses thereof)

REFERENCE 2

AN 137:63466 CA
TI Quantitative structure-activity relationship: IX. Estimation of logP for some peptides
AU Golovanov, I. B.; Tsygankova, I. G.
CS Institute of Theoretical and Experimental Biophysics, Russian Academy of Sciences, Pushchino, Russia
SO Russian Journal of General Chemistry (Translation of Zhurnal Obshchei Khimii) (2002), 72(1), 137-143
CODEN: RJGCEK; ISSN: 1070-3632
PB MAIK Nauka/Interperiodica Publishing
DT Journal
LA English
CC 34-3 (Amino Acids, Peptides, and Proteins)
Section cross-reference(s): 22
AB Based on the previously described quant. structure-activity relationship, estns. were made for the distribution factor (logP) in the octanol-water system of amides of N-acetyl peptides and peptides contg. up to five amino acid residues. Data for di- and tripeptides reasonably agree with the available exptl. data.
ST peptide helical quant structure distribution factor calcn octanol water; mol structure partition logP estn helical acetyl peptide amide
IT QSPR (structure-property relationship)
(distribution factor; quant. mol. structure-property relationship and calcn. of distribution factor for peptides in octanol-water system)
IT Molecular structure-property relationship
(partition; quant. mol. structure-property relationship and calcn. of distribution factor for peptides in octanol-water system)
IT Correlation analysis
Helix (conformation)
Partition
(quant. mol. structure-property relationship and calcn. of distribution factor for peptides in octanol-water system)
IT Peptides, properties
RL: PRP (Properties)
(quant. mol. structure-property relationship and calcn. of distribution factor for peptides in octanol-water system)
IT 74-82-8, Methane, properties 74-84-0, Ethane, properties 74-98-6, Propane, properties 106-97-8, Butane, properties 109-66-0, Pentane, properties 110-54-3, Hexane, properties 111-65-9, Octane, properties 111-84-2, Nonane 124-18-5, Decane 142-82-5, Heptane, properties 968-21-8 1050-28-8 2577-40-4 2578-81-6 2667-02-9 3061-91-4 3063-05-6 3303-31-9 3303-34-2 3303-55-7 3918-94-3 3989-97-7 6403-35-6 6665-16-3 6686-02-8 7669-65-0 10329-74-5 10329-75-6 13116-21-7 13123-35-8 13588-95-9 13589-02-1 14486-13-6 14486-16-9 15080-84-9 17355-10-1 17355-18-9 19653-76-0 20368-24-5 20696-60-0 20762-31-6 21957-32-4 24046-71-7 24205-68-3 24809-25-4 29701-43-7 30802-37-0 34017-16-8 34017-18-0 36077-39-1 36077-41-5 37462-92-3 40204-87-3

42537-99-5 51926-51-3 52329-50-7 52899-07-7 58337-01-2
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143303-47-3 143303-48-4 143303-49-5 143303-50-8 143303-51-9
143303-52-0 143313-20-6 143313-21-7 143313-22-8 143313-23-9
143313-24-0 143313-25-1 152971-76-1 161786-59-0 161786-60-3
161786-66-9 161786-67-0 439809-07-1 439809-09-3
RL: PRP (Properties)
(quant. mol. structure-property relationship and calcn. of distribution factor for peptides in octanol-water system)

RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD


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REFERENCE 3

AN 136:257254 CA
TI Use of DPP IV inhibitors as diuretic and antihypertensive agents
IN Aronson, Peter S.; Girardi, Adriana; Knauf, Felix
PA USA
SO U.S. Pat. Appl. Publ., 3 pp.
CODEN: USXXCO
DT Patent
LA English
IC ICM A61K031-00
ICS C12N009-99
NCL 514001000
CC 1-8 (Pharmacology)
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | US 2002037829 | A1 | 20020328 | US 2001-938325 | 20010823 |

PRAI US 2000-227400P 20000823
AB Dipeptidyl peptidase IV inhibitors are used as diuretics and antihypertensive agents. From studies it was concluded that the DPP IV inhibitor diprotin A decreases NHE3 (Na+-H+ exchanger isoform) activity in OKP cells.
ST dipeptidyl peptidase IV inhibitor diuretic antihypertensive
IT Antihypertensives
Diuretics
(dipeptidyl peptidase IV inhibitors as diuretic and antihypertensive agents)
IT 54249-88-6, Dipeptidyl peptidase IV
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(dipeptidyl peptidase IV inhibitors as diuretic and antihypertensive agents)
IT 90614-48-5, Diprotin a
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(dipeptidyl peptidase IV inhibitors as diuretic and antihypertensive agents)

REFERENCE 4

AN 135:231575 CA
TI Transbuccal peptide delivery: stability and in vitro permeation studies on endomorphin-1
AU Bird, A. P.; Faltinek, J. R.; Shojaei, A. H.
CS School of Pharmacy, Department of Pharmaceutical Sciences, Texas Tech University Health Sciences Center, Amarillo, TX, 79106, USA
SO Journal of Controlled Release (2001), 73(1), 31-36
CODEN: JCREEC; ISSN: 0168-3659
PB Elsevier Science Ireland Ltd.
DT Journal
LA English
CC 63-5 (Pharmaceuticals)
AB The purpose of this study was to investigate the feasibility of buccal delivery of a model peptide, endomorphin-1 (EN1), using stability and in vitro permeation studies. EN1 is a recently isolated .mu.-opiate receptor agonist with high selectivity and specificity for this receptor subtype. Stability studies were conducted in various buffers and the drug was shown to be stable in both acidic and basic buffer systems. In the presence of full thickness porcine buccal epithelium, EN1 was unstable with only 23.4% intact drug present after 6 h. The region responsible for this degrdn. was found to coincide with the major barrier region of the buccal epithelium as delineated through stability expts. in the presence of partial thickness buccal epithelium. Various peptidase inhibitors were used to isolate the enzyme(s) responsible for this degrdn. Diprotin-A, a potent inhibitor of dipeptidyl peptidase IV, provided inhibition of the degrdn. of ENI in the presence of buccal epithelium. In vitro permeation studies revealed that the permeability coeff. of ENI across porcine buccal epithelium was 5.67 .times. 10-7 cm/s. The enzymic degrdn. of ENI was found not to be rate limiting to the drug's permeation across buccal epithelium, as diprotin-A did not increase the permeation of ENI. Na glycocholate as well as Na taurocholate were also ineffective in enhancing the permeation of ENI across porcine buccal epithelium.
ST transbuccal peptide delivery endomorphin permeation stability
IT Drug delivery systems
(buccal; transbuccal peptide delivery)
IT Cheek
(mucosa; transbuccal peptide delivery)
IT Biological transport
(permeation; transbuccal peptide delivery)
IT Peptides, biological studies

RL: BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(transbuccal peptide delivery)

IT 189388-22-5, endomorphin-1
RL: BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(transbuccal peptide delivery)

IT 90614-48-5, Diprotin-A
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(transbuccal peptide delivery, stability of endomorphin-1 in the presence of)

RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD

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REFERENCE 5

AN 133:147118 CA

TI Relating Electrospray Ionization Response to Nonpolar Character of Small Peptides

AU Cech, Nadja B.; Enke, Christie G.

CS Department of Chemistry, University of New Mexico, Albuquerque, NM, 87131, USA

SO Analytical Chemistry (2000), 72(13), 2717-2723
CODEN: ANCHAM; ISSN: 0003-2700

PB American Chemical Society

DT Journal

LA English

CC 9-5 (Biochemical Methods)
Section cross-reference(s): 6

AB Nonpolar regions in biol. mols. are investigated as a detg. factor governing their electrospray ionization (ESI) mass spectrometric response. Response is compared for a series of peptides whose C-terminal residue is varied among amino acids with increasingly nonpolar side chains. Increased ESI response is obsd. for peptides with more extensive nonpolar regions. The basis for this increase is examd. by comparing values of nonpolar surface area and Gibbs free energy of transfer for the different amino acid residues. Comparisons of response with octadecylamine are also made, and this highly surface-active ion is obsd. to outcompete all other analytes in ESI response. These observations are rationalized on the basis of the equil. partitioning model, which is used successfully to fit

exptl. data throughout the concn. range for several two-analyte systems. This model suggests that because excess charge exists on ESI droplet surfaces, an analyte's relative affinity for the droplet surface dets. its relative ESI response. Increased nonpolar character, which leads to enhanced affinity for the surface phase, results in more successful competition for excess charge and higher ESI response.

ST small peptide electrospray ionization nonpolar character correlation

IT Electron impact ionization
Electrospray ionization mass spectrometry
Partition function
Polarity
Surface activity
(relating electrospray ionization response to nonpolar character of small peptides)

IT Peptides, properties
RL: PRP (Properties)
(relating electrospray ionization response to nonpolar character of small peptides)

IT 124-30-1, Octadecylamine 556-33-2 6234-26-0 7451-76-5 14857-82-0 17343-07-6 19729-30-7 20274-89-9 81161-89-9 90614-48-5 90614-49-6
RL: PRP (Properties)
(relating electrospray ionization response to nonpolar character of small peptides)

RE.CNT 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD
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AN 132:293992 CA

TI Inhibitors of Tripeptidyl Peptidase II. 2. Generation of the First Novel Lead Inhibitor of Cholecystokinin-8-Inactivating Peptidase: A Strategy for the Design of Peptidase Inhibitors

AU Ganellin, C. Robin; Bishop, Paul B.; Bambal, Ramesh B.; Chan, Suzanne M. T.; Law, James K.; Marabout, Benoit; Luthra, Pratibha Mehta; Moore, Andrew N. J.; Peschard, Olivier; Bourgeat, Pierre; Rose, Christiane; Vargas, Froylan; Schwartz, Jean-Charles

CS Department of Chemistry, University College London, London, WC1H 0AJ, UK

SO Journal of Medicinal Chemistry (2000), 43(4), 664-674
CODEN: JMCMAR; ISSN: 0022-2623

PB American Chemical Society
DT Journal
LA English
CC 34-3 (Amino Acids, Peptides, and Proteins)
Section cross-reference(s): 7
AB The cholecystokinin-8 (CCK-8)-inactivating peptidase is a serine peptidase which has been shown to be a membrane-bound isoform of tripeptidyl peptidase II (EC 3.4.14.10). It cleaves the neurotransmitter CCK-8 sulfate at the Met-Gly bond to give Asp-Tyr(SO3H)-Met-OH + Gly-Trp-Met-Asp-Phe-NH2. In seeking a reversible inhibitor of this peptidase, the enzymic binding subsites were characterized using a fluorimetric assay based on the hydrolysis of the artificial substrate Ala-Ala-Phe-amidomethylcoumarin. A series of di- and tripeptides having various alkyl or aryl side chains was studied to det. the accessible vol. for binding and to probe the potential for hydrophobic interactions. From this initial study the tripeptides Ile-Pro-Ile-OH (Ki = 1 .mu.M) and Ala-Pro-Ala-OH (Ki = 3 .mu.M) and dipeptide amide Val-Nvl-NHBu (Ki = 3 .mu.M) emerged as leads. Comparison of these structures led to the synthesis of Val-Pro-NHBu (Ki = 0.57 .mu.M) which served for later optimization in the design of butabindide, a potent reversible competitive and selective inhibitor of the CCK-8-inactivating peptidase. The strategy for this work is explicitly described since it illustrates a possible general approach for peptidase inhibitor design.
ST structure activity peptide prepn inhibitor peptidase
IT Structure-activity relationship
(peptidase inhibitory; prepn. of peptides as peptidase inhibitors)
IT Peptides, preparation
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(prepn. of peptides as peptidase inhibitors)
IT 1948-31-8 2390-74-1 3061-90-3 5874-90-8 6234-26-0 7349-78-2
10342-47-9 13485-59-1 13589-04-3 14486-09-0 22840-03-5
27493-61-4 53620-20-5 61430-14-6 88929-13-9 90614-48-5
121880-94-2 121880-95-3 264886-84-2 264886-88-6 264887-00-5
264887-02-7 264887-05-0 264887-06-1 264887-22-1 264887-23-2
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(prepn. of peptides as peptidase inhibitors)
IT 3918-92-1
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); BIOL (Biological study); RACT (Reactant or reagent)
(prepn. of peptides as peptidase inhibitors)
IT 7530-76-9P 19542-54-2P 65849-98-1P 264887-01-6P 264887-10-7P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent)
(prepn. of peptides as peptidase inhibitors)
IT 3321-03-7P 3918-94-3P 82985-55-5P 264886-82-0P 264886-83-1P
264886-85-3P 264886-87-5P 264886-90-0P 264886-91-1P 264886-92-2P
264886-94-4P 264886-96-6P 264886-98-8P 264887-03-8P 264887-04-9P
264887-07-2P 264887-09-4P 264887-11-8P 264887-12-9P 264887-13-0P
264887-15-2P 264887-16-3P 264887-17-4P 264887-20-9P 264887-24-3P
264887-25-4P 264887-27-6P 264887-29-8P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(prepn. of peptides as peptidase inhibitors)
IT 78689-82-4, Cholecystokinin-Inactivating Peptidase 101149-94-4, Tripeptidyl Peptidase II
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL

(Biological study); PROC (Process)
(prepn. of peptides as peptidase inhibitors)

IT 64-04-0, Phenethylamine 100-52-7, Benzaldehyde, reactions 2038-57-5, 3-Phenylpropylamine 3844-54-0 13214-66-9, 4-Phenylbutylamine 39608-30-5 264887-32-3 264887-63-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. of peptides as peptidase inhibitors)

IT 1170-76-9P 2566-19-0P 6120-70-3P 13171-93-2P 15368-72-6P 20998-83-8P 21612-32-8P 32943-08-1P 33905-01-0P 35373-92-3P 87105-26-8P 122315-77-9P 128647-50-7P 148743-43-5P 185212-81-1P 252573-92-5P 264887-54-9P 264887-55-0P 264887-56-1P 264887-57-2P 264887-58-3P 264887-59-4P 264887-60-7P 264887-61-8P 264887-62-9P 264887-64-1P 264887-65-2P 264887-66-3P 264887-67-4P 264887-68-5P 264887-69-6P 264887-70-9P 264887-71-0P 264887-72-1P 264887-73-2P 264887-74-3P 264887-75-4P 264887-76-5P 264887-77-6P 264887-78-7P 264887-79-8P 264887-80-1P 264887-81-2P 264887-82-3P 264887-83-4P 264887-84-5P 264887-85-6P 264887-86-7P 264887-88-9P 264887-89-0P 264887-90-3P 264887-91-4P 264887-92-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. of peptides as peptidase inhibitors)

IT 17136-28-6P 23361-28-6P 84717-00-0P 185212-83-3P 225386-32-3P 264886-89-7P 264887-31-2P 264887-33-4P 264887-35-6P 264887-37-8P 264887-40-3P 264887-42-5P 264887-45-8P 264887-47-0P 264887-50-5P 264887-51-6P 264887-53-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of peptides as peptidase inhibitors)

RE.CNT 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD


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REFERENCE 7

AN 131:253649 CA
TI Aminopeptidases as potential targets for the control of the Australian sheep blowfly, Lucilia cuprina
AU Reed, B. J.; Chandler, D. S.; Sandeman, R. M.
CS Department of Agricultural Sciences, La Trobe University, Bundoora, Australia
SO International Journal for Parasitology (1999), 29(6), 839-850
CODEN: IJPYBT; ISSN: 0020-7519
PB Elsevier Science Ltd.
DT Journal
LA English
CC 5-4 (Agrochemical Bioregulators)
AB Expts. were carried out to investigate the role of proteinases in the growth of larvae of the sheep blowfly, Lucilia cuprina. First instar larvae were incubated on an artificial growth medium in the presence of various concns. of inhibitors of all the major proteinase classes. Inhibitors of serine proteinases and aminopeptidases were found to cause significant growth inhibition and in some cases death of the larvae within 24 h, suggesting that these enzymes were the major classes involved in protein digestion in the gut of the insect. A second group of expts. analyzed the effects of two inhibitors from the same or different proteinase classes in the growth media. Synergistic inhibition of larval growth was obsd. with the incorporation of inhibitors of serine proteinases and aminopeptidases. These classes of proteinases are both central to protein digestion in this insect, probably in the gut, and the inhibition of both types of activity leads to an almost complete blockade of digestion. Testing in vivo gave similar results with infections on sheep skin inhibited by either serine proteinase or aminopeptidase inhibitors and the combination of both stopped the infection process. The role of aminopeptidases in larval metab. and as potential targets for blowfly control agents is examd.
ST Lucilia insecticide serine proteinase aminopeptidase inhibitors
IT Insecticides
Lucilia cuprina
(Lucilia cuprina control using serine proteinase and aminopeptidase inhibitors)
IT 60-00-4, EDTA, biological studies 2364-87-6, Tlck 9078-38-0, SBTI 13434-13-4, Actinonin 30827-99-7, Pefabloc 39324-30-6, Pepstatin 55123-66-5, Leupeptin 58970-76-6, Bestatin 62571-86-2, Captopril 67655-94-1, Amastatin 71933-13-6, APMSF 76547-98-3, Lisinopril 88264-65-7, L-Leucinthiol 90614-48-5, Diprotin A 91196-31-5, Ebelactone 110044-82-1, Calpain inhibitor I 173287-93-9 173287-94-0 173287-95-1 173287-97-3 245094-93-3 245094-97-7 245094-99-9 245095-01-6 245095-02-7 245095-03-8
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(Lucilia cuprina control using serine proteinase and aminopeptidase inhibitors)
IT 9031-94-1, Aminopeptidase 37259-58-8, Serine proteinase
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL

(Biological study); PROC (Process)
(Lucilia cuprina control using serine proteinase and aminopeptidase inhibitors)

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REFERENCE 8

AN 130:163108 CA
TI Diprotin A, an inhibitor of dipeptidyl aminopeptidase IV(EC 3.4.14.5) produces naloxone-reversible analgesia in rats
AU Ronai, Andras Z.; Timar, Julianna; Mako, Eva; Erdo, Franciska; Gyarmati, Zsuzsanna; Toth, Geza; Orosz, Gyorgy; Furst, Susanne; Szekely, Jozsef I.
CS Department of Pharmacology, Semmelweis University of Medicine, Budapest, H-1445, Hung.
SO Life Sciences (1998), Volume Date 1999, 64(2), 145-152
CODEN: LIFSAK; ISSN: 0024-3205
PB Elsevier Science Inc.
DT Journal
LA English
CC 1-11 (Pharmacology)
Section cross-reference(s): 2
AB The dipeptidyl aminopeptidase IV (DP IV) inhibitor Diprotin A produces a full, dose-dependent, short-lasting and naloxone-reversible analgesia in the rat tail-flick test when given intracerebroventricularly, with an ED50 of 295 nmol/rat but it has no direct opioid agonist activity in the longitudinal muscle strip of guinea-pig ileum bioassay. Two of the potential DP IV substrates, morphiceptin and endomorphin 1, identified recently in bovine brain were also analgesic given by similar route. The action of endomorphin I was more potent (ED50 = 7.9 nmol/rat) and slightly but significantly more sustained than that of Diprotin A. Diprotin A neither potentiated nor prolonged the effect of a marginally analgesic dose of endomorphin 1. The distinct time course and the lack of potentiation indicate that in the analgesic effect of Diprotin A in rats the protection of a brain Tyr-Pro-peptide other than endomorphin 1 is involved.
ST dipeptidyl aminopeptidase inhibitor Diprotin A analgesia
IT Analgesics
(inhibitor of dipeptidyl aminopeptidase IV(EC 3.4.14.5) Diprotin A produces naloxone-reversible analgesia in rats in relation to effect of morphiceptin and endomorphin 1)
IT 74135-04-9, Morphiceptin 90614-48-5, Diprotin A 189388-22-5, Endomorphin 1
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(inhibitor of dipeptidyl aminopeptidase IV(EC 3.4.14.5) Diprotin A produces naloxone-reversible analgesia in rats in relation to effect of morphiceptin and endomorphin 1)
IT 54249-88-6
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(inhibitor of dipeptidyl aminopeptidase IV(EC 3.4.14.5) Diprotin A produces naloxone-reversible analgesia in rats in relation to effect of morphiceptin and endomorphin 1)
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REFERENCE 9

AN 129:215577 CA
TI The significance of hypersialylation of dipeptidyl peptidase IV (CD26) in the inhibition of its activity by Tat and other cationic peptides. CD26: a subverted adhesion molecule for HIV peptide binding
AU Smith, Robert E.; Talhouk, Jamil W.; Brown, Elvin E.; Edgar, Susan E.
CS Prototek, Inc., Dublin, CA, 94568, USA
SO AIDS Research and Human Retroviruses (1998), 14(10), 851-868
CODEN: ARHRE7; ISSN: 0889-2229
PB Mary Ann Liebert, Inc.
DT Journal
LA English
CC 15-8 (Immunochemistry)
Section cross-reference(s): 7
AB The functionality of DPP-IV, purified from human placenta and isolated from CD4+/CD26+ T cells of non-infected and HIV-1-infected individuals, was investigated as to its ability to bind certain specific peptides. Using isoelec. focusing and the specificity of substrate-impregnated overlay membranes, the authors found that DPP-IV from term placenta and from T cells of HIV-infected individuals was significantly more sialylated compared with enzyme isoenzyme patterns of other tissues. The authors report here that (1) the no. of isoforms of DPP-IV and extent of sialylation are crit. to function and peptide binding; (2) the no. of sialylated isoforms isolated from PBMCs increases significantly with age greater than 40 yr; (3) hypersialylation by extreme anionic isoforms is highly assocd. with HIV infection and pathognomonic to remaining CD4+ cells in overt AIDS; and (4) highly sialylated DPP-IV is more significantly inhibited by Tat and cationic peptides. The authors conclude that hypersialylation of DPP-IV modifies surface charge of the CD26 antigen, promoting binding of HIV peptides through their cationic domains to the sialic acid residues of DPP-IV, and that certain HIV moieties are likely to engage this phenomenon as an auxiliary adhesion mechanism to fuse with cells. Furthermore, as a consequence of this occurrence, DPP-IV enzymic activity can be significantly reduced, competitively.
ST hypersialylation dipeptidyl peptidase Tat protein; CD26 hypersialylation cationic peptide
IT CD antigens
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(CD26; hypersialylation of dipeptidyl peptidase IV and inhibition of its activity by Tat and other cationic peptides)
IT Peptides, biological studies
RL: ADV (Adverse effect, including toxicity); PRP (Properties); BIOL (Biological study)
(cationic; hypersialylation of dipeptidyl peptidase IV and inhibition of its activity by Tat and other cationic peptides)

IT Envelope proteins
RL: PRP (Properties)
(gp120env; hypersialylation of dipeptidyl peptidase IV and inhibition of its activity by peptide of)
IT T cell (lymphocyte)
(helper cell; hypersialylation of human CD26 in)
IT Aging, animal
(hypersialylation of CD26 in human T-cells in)
IT AIDS (disease)
Human immunodeficiency virus 1
Sialylation
(hypersialylation of dipeptidyl peptidase IV and inhibition of its activity by Tat and other cationic peptides)
IT Vitronectin
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(hypersialylation of dipeptidyl peptidase IV and inhibition of its activity by peptide of)
IT Interleukin 2 receptors
RL: PRP (Properties)
(hypersialylation of dipeptidyl peptidase IV and inhibition of its activity by peptide of)
IT CD4-positive T cell
(hypersialylation of human CD26 in)
IT Transcription factors
RL: ADV (Adverse effect, including toxicity); PRP (Properties); BIOL (Biological study)
(tat; hypersialylation of dipeptidyl peptidase IV and inhibition of its activity by Tat and other cationic peptides)
IT 25104-12-5, Poly-L-ornithine 25212-18-4, Poly-L-arginine 26853-89-4, Poly-D-lysine 41961-57-3 90614-48-5 102579-44-2 151870-85-8 204570-87-6 212556-36-0 212556-37-1 212556-38-2 212556-39-3 212556-40-6
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(hypersialylation of dipeptidyl peptidase IV and inhibition of its activity by Tat and other cationic peptides)

REFERENCE 10

AN 127:326656 CA
TI Methods for the investigation of neuropeptide catabolism and stability in vitro
AU Mentlein, Rolf; Lucius, Ralph
CS Anatomisches Institut der Universitat Kiel, Kiel, D-24098, Germany
SO Brain Research Protocols (1997), 1(3), 237-246
CODEN: BRPRFP; ISSN: 1385-299X
PB Elsevier
DT Journal
LA English
CC 2-1 (Mammalian Hormones)
Section cross-reference(s): 9
AB The protocol describes (i) methods for the investigation of neuropeptide catabolism in the central nervous system (CNS), (ii) the identification of the neuropeptidases involved, and (iii) methods for the detn. of neuropeptide stability in vitro. These methods are applicable also to study the degrdn. of peptide hormones by peripheral cells or tissues. To identify peptide degrdn. products, nanomolar amts. (micromolar concns.) of peptides are incubated in synthetic media with cell or tissue cultures. Aliquots of the supernatants are withdrawn after different times, peptide fragments sepd. and fractionated by reversed-phase HPLC, and identified by peptide chem. methods. The peptidases responsible for this degrdn. can be

identified by the use of specific inhibitors listed in the protocol. For receptor binding assays or the study of peptide effects in physiol., nanomolar concns. the stability of the peptides in an in vitro system should be checked by addn. of radiolabeled peptides (femtomolar or nanomolar concns.) and monitoring the peptide degrdn. by a procedure analogous to that established for unlabeled peptides. The addn. of more or less specific peptidase inhibitors enhances peptide stability in vitro, and thus it can be assured that a given peptide concn. is maintained during biol. assays.

ST neuropeptide catabolism stability neuropeptidase

IT Metabolism
(catabolic; methods for investigation of neuropeptide catabolism and stability in vitro)

IT Brain
(methods for investigation of neuropeptide catabolism and stability in vitro)

IT Neuropeptides
RL: ANT (Analyte); BPR (Biological process); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); PROC (Process)
(methods for investigation of neuropeptide catabolism and stability in vitro)

IT Hormones, animal, biological studies
RL: ANT (Analyte); BPR (Biological process); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); PROC (Process)
(peptide; methods for investigation of neuropeptide catabolism and stability in vitro)

IT 9015-82-1 9031-94-1, Aminopeptidase 9031-96-3, Peptidase 9031-98-5, Carboxypeptidase 9054-63-1 9073-92-1 9074-83-3 37259-58-8, Serine protease 37353-41-6, Cysteine protease 54249-88-6 78169-47-8, Aspartic protease 81669-70-7, Metalloprotease 82707-54-8, Neprilysin 110639-28-6 148938-24-3, Meprin A 149371-24-4, Neurolysin
RL: ANT (Analyte); ANST (Analytical study)
(methods for investigation of neuropeptide catabolism and stability in vitro)

IT 51110-01-1, Somatostatin 58822-25-6, 1-5-.beta.-Neoendorphin (human) 118549-37-4, Insulinotropin
RL: ANT (Analyte); BPR (Biological process); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); PROC (Process)
(methods for investigation of neuropeptide catabolism and stability in vitro)

IT 55-91-4, Diisopropyl fluorophosphate 66-71-7, 1,10-Phenanthroline 329-98-6, Phenylmethanesulfonyl fluoride 9087-70-1, Aprotinin 13434-13-4, Actinonin 26305-03-3 36357-77-4, Phosphoramidon 51050-59-0, 3,4-Dichloroisocoumarin 51926-51-3 58970-76-6, Bestatin 62571-86-2, Captopril 66701-25-5, E-64 67655-94-1, Amastatin 76547-98-3 76721-89-6, Thiorphan 77102-28-4 90614-48-5, Diprotin A 90614-49-6, Diprotin B 103900-19-2, Arphamenine B 116560-97-5 123652-87-9, Probestin 143983-57-7
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(methods for investigation of neuropeptide catabolism and stability in vitro)

IT 9001-92-7, Protease
RL: ANT (Analyte); ANST (Analytical study)
(trypsin-like; methods for investigation of neuropeptide catabolism and stability in vitro)

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